

GELATINOUS CUSHION HAVING ECONOMIC STRUCTURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a gelatinous cushion, and more particularly to a gelatinous cushion having an economized or economic structure.

2. Description of the Prior Art

Various kinds of typical gelatinous cushions have been developed and comprise a number of parallel elongate columns formed from a soft, easily deformable elastic or visco-elastic cushioning media, such as gelatinous elastomer or gelatinous viscoelastomer, etc.

For example, U.S. Patent No. 5,749,111 to Pearce, and U.S. Patent No. 6,026,527 to Pearce disclose two of the typical gelatinous cushions having a characteristic to conform to the shape of the cushioned object while evenly distributing a supporting force across the contact area of the cushioned object and avoiding pressure peaks.

The whole typical gelatinous cushions are made of deformable elastic or visco-elastic cushioning media which is expensive, such that the products made of the expensive gelatinous cushion will also be expensive.

U.S. Patent No. 6,413,458 to Pearce disclose a similar typical gelatinous cushion formed by molding, melting and forcing processes. However, similarly, the whole typical gelatinous cushion is also made of deformable elastic or visco-elastic cushioning media which is expensive, such that the product made of the expensive

gelatinous cushion will also be expensive.

The present invention has arisen to mitigate and/or obviate the afore-described disadvantages of the conventional gelatinous cushions.

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SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide a gelatinous cushion including an economized or economic structure having reduced quantity of deformable elastic or visco-elastic cushioning media.

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In accordance with one aspect of the invention, there is provided a gelatinous cushion comprising a base made of foamable material, a cushioning member attached onto the base, and made of gelatinous material for cushioning purposes, and including an outer peripheral surface formed thereon, and including a plurality of orifices formed therein for cushioning purposes, and an outer covering film applied onto the outer peripheral surface of the cushioning member, to cover the cushioning member, and to form a smooth outer surface for the cushioning member, and to prevent dirt from attaching onto the sticky cushioning member, and/or to prevent the sticky cushioning member from sticking onto various objects, such as users.

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The base includes a plurality of perforations formed therein. The cushioning member includes a plurality of inner peripheral surfaces formed therein, to define the orifices of the cushioning member respectively. The outer covering film is applied onto the inner peripheral surfaces of the cushioning member.

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Further objectives and advantages of the present invention will

become apparent from a careful reading of the detailed description provided hereinbelow, with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIG. 1 is a cross sectional view of a gelatinous cushion in accordance with the present invention;

FIG. 2 is a cross sectional view taken along lines 2-2 of FIG. 3;

FIG. 3 is a cross sectional view taken along lines 3-3 of FIG. 2;

FIGS. 4, 5, 6 are cross sectional views similar to FIG. 3,

10 illustrating the manufacturing processes for making the gelatinous cushion; and

FIG. 7 is a cross sectional view illustrating a pillow formed with the gelatinous cushion.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

15 Referring to the drawings, and initially to FIG. 1, a gelatinous cushion 10 in accordance with the present invention comprises a base 11 made of foamable materials and having a number of perforations 12 formed therein, for such as air circulation purposes, and a cushioning layer or member 14 attached to the base 11, and
20 made of a soft, easily deformable elastic or visco-elastic cushioning media, such as gel, polyurethane (PU), gelatinous elastomer or gelatinous viscoelastomer, or other synthetic materials.

The elastic or visco-elastic cushioning media may normally include a sticky characteristic and may easily stuck onto various
25 objects, such that the outer peripheral surface 18 of the cushioning member 14 may be easily covered with a layer of dirt. It is preferable that the cushioning member 14 includes a number of

apertures or columns 15 formed therein and each defined by an inner peripheral surface 19.

In order to cover or shield the sticky cushioning member 14 that is made of the elastic or visco-elastic cushioning media, an outer covering film 17 is further provided and attached onto the outer peripheral surface 18 of the cushioning member 14 and/or the inner peripheral surfaces 19 of the cushioning member 14, in order to form a smooth and non-sticky outer peripheral surface 18 for the cushioning member 14.

Referring next to FIGS. 2 and 3, illustrated is a mold device 30 for forming or manufacturing the gelatinous cushion 10. The mold device 30 includes a chamber 31 formed therein, and defined by an inner peripheral surface 32, and includes one or more partitions or ribs 33 extended from a bottom surface 34 thereof, and extended into the chamber 31 thereof, in order to form or define one or more orifices 35 therein, and to form or define a peripheral slot 37 between the ribs 33 and the inner peripheral surface 32 of the mold device 30.

The chamber 31 and/or the ribs 33 and/or the orifices 35 and/or the peripheral slot 37 of the mold device 30 may include or may be formed into a shape corresponding to that of the shapes of the products to be made, such as mattresses, shoe soles, seat cushions, pillows, etc.

Referring next to FIGS. 4-6, illustrated are processes or procedures for forming or manufacturing the gelatinous cushion 10 with the mold device 30. For example, as shown in FIG. 4, a resilient or soft or deformable or gelatinous material 40 is sprayed

or applied onto the outer peripheral surfaces 38 of the ribs 33, and onto the bottom surface 34 and/or the inner peripheral surface 32 of the mold device 30, in order to form the outer covering film 17 of the gelatinous cushion 10.

5 As shown in FIG. 1, the gelatinous material 40 may thus be used to form the outer covering film 17 of the gelatinous cushion 10, and may be formed on the outer peripheral surface 18 and/or the inner peripheral surfaces 19 of the cushioning member 14, in order to cover or shield the sticky cushioning member 14, and to prevent
10 dirt from attaching onto the sticky cushioning member 14, and/or to prevent the sticky cushioning member 14 from sticking onto various objects, such as users.

As shown in FIG. 5, another resilient or soft or deformable or gelatinous material 50 is then filled into the orifices 35 and/or the
15 peripheral slot 37 of the mold device 30, to form the cushioning member 14 of the gelatinous cushion 10. As shown in FIG. 6, a further resilient or soft or deformable or gelatinous material 60 is then filled into the chamber 31 of the mold device 30, to form the base 11 of the gelatinous cushion 10.

20 The cushioning member 14 and the outer covering film 17 of the gelatinous cushion 10 are all manufactured with the gelatinous materials having catalysts or catalyst combinations mixed therein. The catalysts or catalyst combinations are normally used in quantities of 0.001 to 5 percent by weight, preferably of 0.05 to 3
25 percent by weight based on the weight of the gelatinous materials.

In which, the material for forming the outer covering film 17 of the gelatinous cushion 10 may include the catalysts or catalyst

combinations having a quantity of greater percent by weight than that for the cushioning member 14 of the gelatinous cushion 10.

The base 11 is made of foamable materials which are cheaper or less expensive than the gelatinous materials, and forms the inner
5 or base portion of the gelatinous cushion 10 that will not be contacted by the users. The base 11 may include the catalysts or catalyst combinations having a quantity of greater percent by weight than that for the cushioning member 14 and the outer covering film 17 of the gelatinous cushion 10, for example. In addition, the base
10 11 may also be made of waste or recycled materials.

As shown in FIG. 7, illustrated is a pillow 70 to be formed with the gelatinous cushion 10. The pillow 70 also includes a base 11 having a shape for comfortably supporting the heads of the users, and a cushioning member 14 attached onto the upper or the outer
15 portion of the base 11, to comfortably support the heads of the users. The cushioning member 14 also includes a number of apertures or columns 15 formed therein and each defined by an inner peripheral surface 19.

The outer covering film 17 may also be attached onto the outer
20 peripheral surface 18 and/or the inner peripheral surfaces 19 of the cushioning member 14, to form the smooth and non-sticky outer peripheral surface 18 for the cushioning member 14, and to prevent dirt from attaching onto the sticky cushioning member 14, and/or to prevent the sticky cushioning member 14 from sticking onto various
25 objects, such as users.

Accordingly, the gelatinous cushion in accordance with the present invention includes an economized or economic structure

having reduced quantity of deformable elastic or visco-elastic cushioning media.

Although this invention has been described with a certain degree of particularity, it is to be understood that the present
5 disclosure has been made by way of example only and that numerous changes in the detailed construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.